

## WEST Search History

[Hide Items](#) [Restore](#) [Clear](#) [Cancel](#)

DATE: Monday, January 31, 2005

| <u>Hide?</u>   | <u>Set Name</u> | <u>Query</u>  | <u>Hit Count</u> |
|--|-----------------|---|------------------|
| <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i> |                 |   |                  |
| <input type="checkbox"/>                                       | L2              | (formohydroximic acid\$1) or (formylhydroxamic acid\$1) | 0                |
| <input type="checkbox"/>                                       | L1              | formohydroxamic acid\$1                                 | 19               |

END OF SEARCH HISTORY

## WEST Search History

[Hide Items](#) [Restore](#) [Clear](#) [Cancel](#)

DATE: Sunday, January 30, 2005

| <u>Hide?</u>   | <u>Set Name</u> | <u>Query</u>                                 | <u>Hit Count</u> |
|--|-----------------|--|------------------|
| <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i> |                 |  |                  |
| <input type="checkbox"/>                                       | L9              | l7 and l8                                    | 27               |
| <input type="checkbox"/>                                       | L8              | photoresist\$1 or semiconductor\$1           | 1544373          |
| <input type="checkbox"/>                                       | L7              | l6 and l4                                    | 746              |
| <input type="checkbox"/>                                       | L6              | hydroxy\$5 near5 amide\$1                    | 22619            |
| <input type="checkbox"/>                                       | L5              | l3 and l4                                    | 830              |
| <input type="checkbox"/>                                       | L4              | 510/\$.ccls.                                 | 39503            |
| <input type="checkbox"/>                                       | L3              | hydroxy\$1 near10 amide\$1                   | 28940            |
| <input type="checkbox"/>                                       | L2              | N-hydroxyformamide\$1 or hydroxyformamide\$1 | 49               |
| <input type="checkbox"/>                                       | L1              | N-hydroxyformamide\$1                        | 40               |

END OF SEARCH HISTORY

|                      |  |            |         |
|----------------------|--|------------|---------|
| => file reg          |  | SINCE FILE | TOTAL   |
| COST IN U.S. DOLLARS |  | ENTRY      | SESSION |
| FULL ESTIMATED COST  |  | 0.21       | 0.21    |

FILE 'REGISTRY' ENTERED AT 15:31:05 ON 31 JAN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 30 JAN 2005 HIGHEST RN 823177-37-3  
 DICTIONARY FILE UPDATES: 30 JAN 2005 HIGHEST RN 823177-37-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

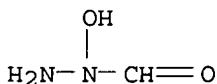
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> s hydroxyformamide  
 L1 34 HYDROXYFORMAMIDE

=> d 31-34

L1 ANSWER 31 OF 34 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 167903-31-3 REGISTRY  
 CN Hydrazinecarboxaldehyde, 1-hydroxy- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN N-Amino-N-hydroxyformamide  
 FS 3D CONCORD  
 MF C H4 N2 O2  
 SR CA  
 LC STN Files: CA, CAPLUS  
 DT.CA CAplus document type: Journal  
 RL.NP Roles from non-patents: PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 32 OF 34 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 67607-62-9 REGISTRY  
 CN L-Tryptophan, compd. with N-hydroxyformamide (1:1) (9CI) (CA

INDEX NAME)

OTHER CA INDEX NAMES:

CN Formamide, N-hydroxy-, compd. with L-tryptophan (1:1) (9CI)

FS STEREOSEARCH

MF C11 H12 N2 O2 . C H3 N O2

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

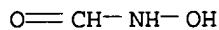
RL.NP Roles from non-patents: ANST (Analytical study)

RLD.NP Roles for non-specific derivatives from non-patents: RACT (Reagent or reagent)

CM 1

CRN 4312-87-2

CMF C H3 N O2

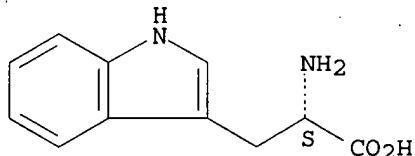


CM 2

CRN 73-22-3

CMF C11 H12 N2 O2

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 33 OF 34 REGISTRY COPYRIGHT 2005 ACS on STN

RN 57470-05-0 REGISTRY

CN Formamide, N-(4-chlorophenyl)-N-hydroxy-, compd. with N-[3,5-bis(1,1-dimethylpropyl)phenyl]-N'-(4-chlorophenyl)methanimidamide N'-oxide (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Methanimidamide, N-[3,5-bis(1,1-dimethylpropyl)phenyl]-N'-(4-chlorophenyl)-, N'-oxide, compd. with N-(4-chlorophenyl)-N-hydroxyformamide (1:1) (9CI)

MF C21 H27 Cl N2 O . C7 H6 Cl N O2

LC STN Files: BEILSTEIN\*, CA, CAPLUS

(\*File contains numerically searchable property data)

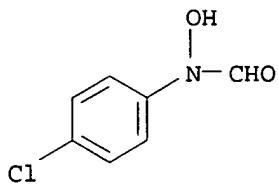
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

CM 1

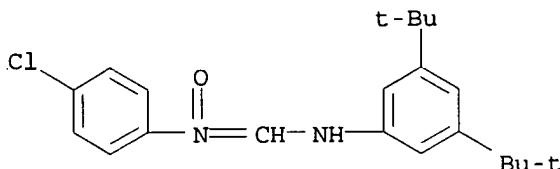
CRN 57470-04-9

CMF C7 H6 Cl N O2



CM 2

CRN 57470-02-7  
CMF C21 H27 Cl N2 O



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 34 OF 34 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 4312-87-2 REGISTRY  
 CN Formamide, N-hydroxy- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Formohydroxamic acid (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN Formohydroximic acid  
 CN Formylhydroxamic acid  
 CN Formylhydroxylamine  
 CN N-Formylhydroxylamine  
 CN **N-Hydroxyformamide**  
 CN NSC 101638  
 FS 3D CONCORD  
 DR 455280-74-7  
 MF C H3 N O2  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, EMBASE,  
 GMELIN\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, RTECS\*, SPECINFO, TOXCENTER,  
 USPATFULL  
 (\*File contains numerically searchable property data)  
 DT.CA Caplus document type: Conference; Dissertation; Journal; Patent; Report  
 RL.P Roles from patents: ANST (Analytical study); PREP (Preparation); PROC  
 (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);  
 NORL (No role in record)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
 study); PREP (Preparation); PROC (Process); USES (Uses)  
 RL.NP Roles from non-patents: BIOL (Biological study); FORM (Formation,  
 nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties);  
 RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses)

$$\text{O}=\text{CH}-\text{NH}-\text{OH}$$

\*\* PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT \*\*

196 REFERENCES IN FILE CA (1907 TO DATE)  
44 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
196 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> sel chem 34  
E1 THROUGH E9 ASSIGNED

=> file .jrh  
COST IN U.S. DOLLARS

|                     | SINCE FILE ENTRY | TOTAL SESSION |
|---------------------|------------------|---------------|
| FULL ESTIMATED COST | 13.57            | 13.78         |

FILE 'USPATFULL' ENTERED AT 15:32:41 ON 31 JAN 2005  
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CAPLUS' ENTERED AT 15:32:41 ON 31 JAN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'IFIPAT' ENTERED AT 15:32:41 ON 31 JAN 2005  
COPYRIGHT (C) 2005 IFI CLAIMS(R) Patent Services (IFI)

FILE 'JAPIO' ENTERED AT 15:32:41 ON 31 JAN 2005  
COPYRIGHT (C) 2005 Japanese Patent Office (JPO) - JAPIO

=> S E1-9  
3 FILES SEARCHED...  
L2 347 ("FORMOHYDROXAMIC ACID"/BI OR "FORMOHYDROXIMIC ACID"/BI OR "FORMYLHYDROXAMIC ACID"/BI OR FORMYLHYDROXYLAMINE/BI OR N-FORMYLHYDROXYLAMINE/BI OR N-HYDROXYFORMAMIDE/BI OR "NSC 101638"/BI OR 4312-87-2/BI OR 455280-74-7/BI)

=> s 12 (p) (cleaning or laundry)  
L3 3 L2 (p) (CLEANING OR LAUNDRY)

=> d 1-3 hit

L3 ANSWER 1 OF 3 USPATFULL on STN

The **cleaning** composition of the present invention is characterized by containing **N-hydroxyformamide**. The **cleaning** composition is capable of easily removing patterned photoresist masks or resist residues remaining on substrates after the etching process or removing resist residues remaining after the etching process and the subsequent ashing process within a short period of time without causing the corrosion of wiring materials and insulating films, thereby ensuring the fine processing to provide high-precision wiring circuits.

SUMM. [0009] As a result of extensive study in view of achieving the above object, the inventor has found that a **cleaning** composition containing **N-hydroxyformamide** removes resist residues, etc. easily within a short period of time without causing the corrosion of wiring materials and insulating films, thereby ensuring the fine processing to provide high-precision wiring circuits.

- SUMM [0010] Thus, the present invention provides a **cleaning** composition containing **N-hydroxyformamide**.
- SUMM [0012] The **cleaning** composition of the present invention for **cleaning** substrates contains **N-hydroxyformamide** represented by the following formula (2):  
##STR1##
- SUMM [0015] The resist stripping capability of the **cleaning** composition of the present invention can be enhanced by the use of **N-hydroxyformamide** in combination with an alkaline compound. Since the **cleaning** composition is to be used in the production of semiconductors, etc., it is preferred for the alkaline compound to include no metallic element. The alkaline compound may include ammonia, alkylamines, alkanolamines, polyamines, hydroxylamine compounds, cyclic amines, quaternary ammonium salts.
- SUMM [0031] The **cleaning** composition may further contain an amine polymer having an average molecular weight of 250 or more. The amine polymer is very effective for preventing the corrosion of silicon, aluminum, aluminum alloy, copper, copper alloy and tungsten, and provides a non-corrosive composition when used in combination with **N-hydroxyformamide** (formhydroxamic acid). Such a composition is extremely effective for preventing the corrosion of silicon, and very effective for preventing the corrosion of copper. The amine polymer may contain nitrogen atoms in either of side chains or backbone chains. The upper limit of the molecular weight is not strictly limited, but an excessively large molecular weight makes the amine polymer less miscible with other components of the **cleaning** composition. Therefore, the upper limit of the molecular weight is preferably 100,000. The amine polymer may be in the free form or the salt form, and may be suitably selected depending on the purpose. Preferred are the free form and the organic acid salt form.
- SUMM [0035] The **cleaning** composition of the present invention may further contain a hydroxymethylamino compound represented by the following formula (1). The hydroxymethylamino compound enhances the stripping capability to organic resists. Therefore, by the use of the hydroxymethylamino compound in combination with **N-hydroxyformamide**, resists and resist residues are both effectively removed. ##STR3##
- DETD [0051] The semiconductor substrate was immersed at 70° C. for 30 min in a **cleaning** composition comprising 30% by weight of ethanalamine, 5% by weight of **N-hydroxyformamide**, 45% by weight of N-methylpyrrolidone, 19.999% by weight of water and 0.001% by weight of polyallylamine (molecular weight: 2000). After successively rinsed with isopropanol and super pure water and dried, the substrate was observed under a scanning electron microscope (SEM).
- DETD [0063] In these examples and comparative examples, the production of a thin film transistor was simulated. On a glass substrate, two low-temperature polysilicon layers (about 300 Å thick) having an intervening SiO<sub>2</sub> layer were formed. Further disposed thereon was an insulating layer on which resists remained. The insulating layer was partly removed to cause a part of the polysilicon layers to be exposed to direct contact with the **cleaning** composition for resist stripping. The substrate was immersed at 40° C. for 15 min in each **cleaning** composition shown in Table 4, rinsed with water, dried by blowing nitrogen gas, and the observed under an optical microscope to evaluate the resist removal and the corrosion of the polysilicon layer. The results are shown in Table 4.

TABLE 4

| Compositions |  | Resist Removal | Corrosion |
|--------------|--|----------------|-----------|
|--------------|--|----------------|-----------|

**Examples**

|    |  |                                 |         |      |
|----|--|---------------------------------|---------|------|
| 17 | ethanolamine<br>N-methylpyrrolidone<br>polyethyleneimine<br>(MW = 10000) | 5 wt %<br>74.9 wt %<br>0.1 wt % | removed | none |
|    | <b>N-hydroxyformamide</b>  | 1 wt %                          |         |      |
|    | water  | 20 wt %                         |         |      |
| 18 | isopropanolamine<br>dimethylacetamide<br>polyallylamine<br>(MW = 3000)   | 3 wt %<br>60 wt %<br>0.01 wt %  | removed | none |
|    | <b>N-hydroxyformamide</b>  | 1 wt %                          |         |      |
|    | water  | 34.99 wt %                      |         |      |
|    | N-hydroxymethylamino-2-propanol  | 1 wt %                          |         |      |
| 19 | aminoethylaminoethanol<br><b>N-hydroxyformamide</b>                      | 30 wt %<br>1 wt %               | removed | none |
|    | dipropylene glycol   | 69 wt %                         |         |      |
| 20 | dimethylaminoethanol<br><b>N-hydroxyformamide</b>                        | 94 wt %<br>1 wt %               | removed | none |
|    | methylolurea   | 2 wt %                          |         |      |
|    | water  | 3 wt %                          |         |      |

**Comparative Examples**

|   |  |                              |             |          |
|---|--|------------------------------|-------------|----------|
| 7 | N-methylpyrrolidone<br>water<br>ethanolamine   | 75 wt %<br>20 wt %<br>5 wt % | removed     | corroded |
| 8 | isopropanolamine<br>dimethylacetamide<br>water | 3 wt %<br>62 wt %<br>35 wt % | not removed | corroded |

CLM What is claimed is:

1. A **cleaning** composition comprising a **N-hydroxyformamide**.
2. The **cleaning** composition according to claim 1, wherein the content of the **N-hydroxyformamide** is 0.001 to 95% by weight.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AB The composition comprises a **N-hydroxyformamide** and an alkaline compound, such as amines or amine polymers. The **cleaning** composition is capable of easily removing patterned photoresist masks or resist residues remaining on substrates after the etching process and the subsequent ashing process within a short period of time without causing the corrosion of wiring materials and insulating films to ensure the fine processing to provide high-precision wiring circuits. Thus, a SiO<sub>2</sub>/Ti/TiN/Al-Cu/TiN laminate was applied with a resist composition, patterned, dry etched and ashed, and immersed in a **cleaning** composition containing **N-hydroxyformamide** 15, ethanolamine 70 and water 15% at 70° for 30 min, showing the resist completely removed.

IT 75-59-2, Tetramethylammonium hydroxide 78-96-6, Isopropanolamine 108-01-0, Dimethylaminoethanol 109-83-1, N-Methylethanamine 111-42-2, Diethanolamine, uses 127-19-5, Dimethylacetamide 141-43-5, Ethanolamine, uses 872-50-4, N-Methylpyrrolidone, uses 929-06-6 1000-82-4, Methylolurea 1121-83-1, 2-Oxazolidinone, 5,5-dimethyl-

**4312-87-2, N-Hydroxyformamide** 7803-49-8D,  
Hydroxyamine, derivs. 9002-98-6 30551-89-4, Polyallylamine  
65184-12-5 70495-38-4 76733-35-2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**cleaning** compns. for removing photoresist masks or resist residues on substrates)

- L3 ANSWER 3 OF 3 IFIPAT COPYRIGHT 2005 IFI on STN  
AB The **cleaning** composition of the present invention is characterized by containing **N-hydroxyformamide**. The **cleaning** composition is capable of easily removing patterned photoresist masks or resist residues remaining on substrates after the etching process or removing resist residues remaining after the etching process and the subsequent ashing process within a short period of time without causing the corrosion of wiring materials and insulating films, thereby ensuring the fine processing to provide high-precision wiring circuits.  
ECLM 1. A **cleaning** composition comprising a **N-hydroxyformamide**.  
ACLM 2. The **cleaning** composition according to claim 1, wherein the content of the **N-hydroxyformamide** is 0.001 to 95% by weight.  
3. The **cleaning** composition according to claim 1, further comprising an alkaline compound.  
4. The **cleaning** composition according to claim 3, wherein the alkaline compound is free from metallic element.  
5. The **cleaning** composition according to claim 3, wherein the alkaline compound is at least one compound selected from the group consisting of alkyl amines, alkanol amines, polyamines, hydroxyl amine compounds, cyclic amines, and quaternary ammonium salts.  
6. The **cleaning** composition according to claim 1, further comprising an organic solvent.  
7. The **cleaning** composition according to claim 1, further comprising a corrosion inhibitor.  
8. The **cleaning** composition according to claim 1, further comprising an amine polymer having an average molecular weight of 250 or more.  
9. The **cleaning** composition according to claim 8, wherein the amine polymer is at least one polymer selected from the group consisting of polyallylamines, polyethyleneimines and polyvinylamines.  
10. The **cleaning** composition according to claim 1, further comprising a compound having a hydroxymethylamino structure represented by the following formula (1):

D R A W I N G

wherein R1 and R2 are each independently hydrogen or substituent having 1 to 12 carbon atoms, R1 and R2 optionally being bonded to each other to form together with nitrogen a ring structure having 2 to 12 carbon atoms.  
11. The **cleaning** composition according to claim 1, further comprising water.

12. A method for **cleaning** a substrate of semiconductor integrated circuits or liquid crystal display devices, the method comprising a step of bringing the substrate into contact with the **cleaning** composition as defined in claim 1.

=> d 1-3 ibib

L3 ANSWER 1 OF 3 USPATFULL on STN  
ACCESSION NUMBER: 2004:64242 USPATFULL  
TITLE: Cleaning composition  
INVENTOR(S): Ikemoto, Kazuto, Tokyo, JAPAN

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2004048761 A1 20040311  
APPLICATION INFO.: US 2003-654997 A1 20030905 (10)

NUMBER DATE

PRIORITY INFORMATION: JP 2002-263342 20020909

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: ANTONELLI, TERRY, STOUT & KRAUS, LLP, 1300 NORTH  
SEVENTEENTH STREET, SUITE 1800, ARLINGTON, VA,  
22209-9889

NUMBER OF CLAIMS: 12

EXEMPLARY CLAIM: 1

LINE COUNT: 573

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:203532 CAPLUS

DOCUMENT NUMBER: 140:237577

TITLE: Cleaning compositions for removing photoresist masks  
or resist residues on substrates and their cleaning  
method

INVENTOR(S): Ikemoto, Kazuto

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE       | APPLICATION NO. | DATE       |
|------------------------|--------|------------|-----------------|------------|
| US 2004048761          | A1     | 20040311   | US 2003-654997  | 20030905   |
| JP 2004101849          | A2     | 20040402   | JP 2002-263342  | 20020909   |
| CN 1488740             | A      | 20040414   | CN 2003-159130  | 20030909   |
| PRIORITY APPLN. INFO.: |        |            | JP 2002-263342  | A 20020909 |
| OTHER SOURCE(S):       | MARPAT | 140:237577 |                 |            |

L3 ANSWER 3 OF 3 IFIPAT COPYRIGHT 2005 IFI on STN

AN 10541543 IFIPAT;IFIUDB;IFICDB

TITLE: CLEANING COMPOSITION

INVENTOR(S): Ikemoto; Kazuto, Tokyo, JP

PATENT ASSIGNEE(S): Unassigned

AGENT: ANTONELLI, TERRY, STOUT & KRAUS, LLP, 1300 NORTH  
SEVENTEENTH STREET, SUITE 1800, ARLINGTON, VA,  
22209-9889, US

NUMBER PK DATE

| PATENT INFORMATION:      | US 2004048761  | A1 | 20040311 |
|--------------------------|----------------|----|----------|
| APPLICATION INFORMATION: | US 2003-654997 |    | 20030905 |

NUMBER DATE

PRIORITY APPLN. INFO.: JP 2002-263342 20020909

FAMILY INFORMATION: US 2004048761 20040311

DOCUMENT TYPE: Utility

Patent Application - First Publication

FILE SEGMENT: CHEMICAL

APPLICATION

NUMBER OF CLAIMS: 12

=> dup rem l3  
PROCESSING COMPLETED FOR L3  
L4 1 DUP REM L3 (2 DUPLICATES REMOVED)

=> log y

| COST IN U.S. DOLLARS                       | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST                        | 50.60            | 64.38         |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE                        | -0.73            | -0.73         |

STN INTERNATIONAL LOGOFF AT 15:35:20 ON 31 JAN 2005